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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,895	03/30/2004	Hideki Kuwajima	43890-670	1335

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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT PAPER NUMBER

2627

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/811,895	Applicant(s) KUWAJIMA ET AL.	
	Examiner William J. Klimowicz	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-5, 8-15 and 18 is/are pending in the application.
4a) Of the above claim(s) 5, 9, 11 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 8 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Species I (corresponding to Figures 1-4) in the reply filed on June 30, 2006 is acknowledged.

Claim 5, 9, 11 and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 30, 2006.

Drawings

Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1, 4, 8 and 10 are objected to because of the following informalities:

With regard to claim 1 (line 11), the phrase "hollow circular opening" should be changed to the phrase --hollow circular hole-- in order to remain consistent with the preceding claim language.

With regard to claim 4 (line 1), the word "spindl e" should be spelled as the word --spindle--.

With regard to claim 8 (line 1), the word "a ccording" should be spelled as the word --according--.

With regard to claim 10 (line 12), the phrase "hollow circular opening" should be changed to the phrase --hollow circular hole-- in order to remain consistent with the preceding claim language.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With regard to claims 3 and 13, the phrase “wherein the rotor hub and the rotor-side bearing member *are made of a same material* and formed integrally” lacks support in the disclosure as originally filed (emphasis added). More concretely, in an amendment filed on April 19, 2006, claim 3 was amended to add the phrase “are made of a same material and” to original claim 3. There is, however, no support for such a description of the rotor hub relative to the rotor-side bearing in the original disclosure. Although the rotor hub and rotor side bearing may indeed be “fabricated into a single component,” this component need not be homogeneous in its composition, or in fact, could simply be two separate components, molded into one. Claim 3, as amended, requires a single material, for which there is no support in the original disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Hisabe et al. (EP 0 392 500 A2).

As per claim 1 (as well as claim 10, rejected, *infra*), Hisabe et al. (EP 0 392 500 A2) discloses a disk drive (FIG. 16) and spindle motor (FIG. 1) comprising a chassis (1); a rotor magnet (8); a rotor-side bearing member (7); a stator-side bearing member (3 and/or 3b and/or 4); a rotor hub (6) having a hollow circular hole (16) and disposed to the center of rotation; a support column (2) secured to the chassis (1); and a stator armature (5) having a wound coil

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(coils wound around stator core (5)) and disposed to the chassis (1) in a position confronting the rotor magnet (8); wherein the support column (2) is disposed to the chassis (1) in a manner to pass through the hollow circular opening (16) in the rotor hub (6); wherein the chassis (1) has a protruding portion (e.g., either of the stepped portions of (2); the first step being the portion upon which stator core abuts- the other step being the portion wherein stator core (5) terminates of (2) - both are large diameter portions which protrude from chassis (1) and at an outer diameter greater than the thinnest portion of shaft at (14)) in an area around the support column (2), and a height of the aforementioned protruding portion is greater than a height of the stator-side bearing member (3 and/or 3b and/or 4) - see FIG. 1, and wherein the rotor-side bearing member (7), in combination with the stator-side bearing member (3 and/or 3b and/or 4) disposed to the chassis (1), forms a fluid bearing for supporting the rotor hub (6) (e.g., see COL. 8, lines 17-33).

As per claim 2 (as well as claim 12, rejected, *infra*), wherein the fluid bearing (3 and/or 3b and/or 4) comprises a thrust bearing (e.g., formed at (3a) and (3b)) having a dynamic pressure generating groove formed in any of two axially confronting surfaces of the rotor-side bearing member (3a) and the stator-side bearing member (3b) - see COL. 6, lines 29-41), and a radial bearing (formed between (4a) and (4b)) having another dynamic pressure generating groove formed in any of two radially confronting surfaces of the rotor-side bearing member (4a) and the stator-side bearing member (4b) - see COL. 6, lines 21-28.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hisabe et al. (EP 0 392 500 A2).

See the description of Hisabe et al. (EP 0 392 500 A2), *supra*.

Additionally, as per claim 4, Hisabe et al. (EP 0 392 500 A2) further discloses wherein the support column (2) retaining the stator-side bearing member (4) comprises a flat portion (e.g., portion of (1)) and a cylindrical portion (2), and the flat portion (1) and the cylindrical portion (2) assembled into a unit.

With regard to claims 4 (as well as claim 14, rejected, *infra*), although Hisabe et al. (EP 0 392 500 A2) does not expressly disclose wherein the flat portion (1) and the cylindrical portion (2) are separate pieces, Official notice is taken that separate components in disk drives, which are then joined into an assembled unit, are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the flat portion (1) and the cylindrical portion (2) of Hisabe et al. (EP 0 392 500 A2) as initially being separate pieces.

The rationale is as follows: one of ordinary skill in the art would have been motivated to the flat portion (1) and the cylindrical portion (2) of Hisabe et al. (EP 0 392 500 A2) as initially being separate pieces in order to facilitate assembly of the device, increase yield by being able to discard a single defective piece, in lieu of a complete single and more comprehensive unity piece, etc.

Additionally, the product by process limitations are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17(footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process limitations or steps, which must be determined in a “product by process” claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Claims 10, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisabe et al. (EP 0 392 500 A2) in view of Aoyanagi (JP 10-125053 A).

See the description of Hisabe et al. (EP 0 392 500 A2), *supra*.

As per claim 12, see the rejection pertaining to claim 2, *supra*.

As per claim 14, see the rejection pertaining to claim 4, *supra*.

With regard to claim 10, although Hisabe et al. (EP 0 392 500 A2) does not expressly disclose wherein the cover of a disk drive includes an abutment portion in abutment on one of tip ends of the cylindrical portion constituting the support column in the spindle motor, such structure is well known and used in the art.

As just an example, Aoyanagi (JP 10-125053 A) discloses an analogous spindle motor used in an analogous disk drive, wherein the cover (16) of a disk drive (10) includes an abutment portion (protruding portion of cover (16) directly adjacent spindle screw (20)) in abutment on one of tip ends of the cylindrical portion (11a) constituting the support column in the spindle motor (see FIG. 1).

Given the express teachings and motivations, as espoused by Aoyanagi (JP 10-125053 A), it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the structure of an abutment portion, as disclosed by Aoyanagi (JP 10-125053 A), to the drive and spindle motor of Hisabe et al. (EP 0 392 500 A2).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the structure of an abutment portion, as disclosed by Aoyanagi (JP 10-125053 A), to the drive and spindle motor of Hisabe et al. (EP 0 392 500 A2) in order to minimize vibration of the cover member, while stabilizing it, by affixing the top of the shaft of the spindle column to a protruding part of the top cover, as is well known, established and appreciated in the art, as exemplified by Aoyanagi (JP 10-125053 A).

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Allowable Subject Matter

Claims 8 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

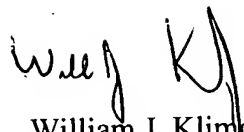
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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William J. Klimowicz
Primary Examiner
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WJK